Lead Dioxide

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Lead Dioxide**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25380**

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Oxidizing
Oxidizing solids, category 3

Irritant
Acute toxicity (oral, dermal, inhalation), category 4

Health hazard
Carcinogenicity, category 1B
Reproductive toxicity, category 1A
Specific target organ toxicity following repeated exposure, category 2

Environmentally Damaging
Acute hazards to the aquatic environment, category 1
Chronic hazards to the aquatic environment, category 1

Oxidizing Solids 3
Ac. Oral Tox. 4
Ac. Inhal Tox. 4
Carcin 1B
Repro Tox. 1A
STOT RE 2
Aq. AcTox. 1
Aq. ChrTox. 1

Signal word :Danger

Hazard statements:
May intensify fire; oxidizer
Harmful if swallowed

Harmful if inhaled
May cause cancer
May damage fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure
Very toxic to aquatic life with long lasting effects

Precautionary statements:

If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Obtain special instructions before use
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
Use personal protective equipment as required
Do not handle until all safety precautions have been read and understood
Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep/Store away from clothing/combustible materials
Take any precaution to avoid mixing with combustibles
Do not breathe dust/fume/gas/mist/vapours/spray
Wash skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF exposed or concerned: Get medical advice/attention
In case of fire: Use agents recommended in section 5 for extinction
Collect spillage
Store locked up
Dispose of contents and container as instructed in Section 13

Other Non-GHS Classification:

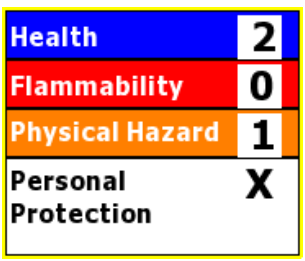
WHMIS

C 

D2B 

NFPA/HMIS

NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 1309-60-0	Lead dioxide	<100 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Seek medical attention.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Loosen clothing and place exposed in a comfortable position.

After skin contact: Seek medical attention.Wash hands and exposed skin with soap and plenty of water.

After eye contact: Immediately seek medical attention.Protect unexposed eye.Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.Keep eye lids open while rinsing.

After swallowing: Rinse mouth with water.Do not induce vomiting. Never give anything by mouth to an unconscious person.Immediately seek medical attention.

Most important symptoms and effects, both acute and delayed:

1309-60-0 loss of appetite, insomnia, weakness, muscle pain, Irritation.Shortness of breath.Headache.Nausea.Dizziness.;1309-60-0 Large dust exposure may cause encephalopathy, seizures, coma, and cardio respiratory arrest.1309-60-0 Ingestion may lead to dizziness, abdominal cramps, vomiting, bloody diarrhea, metallic taste, weakness, and convulsions

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water spray to cool unopened containers.Use only water if in contact with burning combustibles.

For safety reasons unsuitable extinguishing agents: When dry acts as an oxidizer towards organics. Smothering the fire may not be effective.

Special hazards arising from the substance or mixture:

Toxic lead oxides fumes.Combustible dust formation is a risk.Oxidizer, may explode if heated as an intimate mixture with a combustible.Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid dust formation.Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment.Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel.Small spills can be mixed with

vermiculite or sodium carbonate and swept up. Do not mix reclaimed spills with combustible waste.Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13.Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location.Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection



Control Parameters:	1309-60-0, Lead dioxide, TWA 0.05 mg/m3 USA. ACGIH 1309-60-0, Lead dioxide, TWA 0.05 mg/m3 USA. NIOSH 1309-60-0, Lead dioxide, PEL 0.05 mg/m3 OSHA
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	If handling material in the form of a fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.Material may form or contain a fine dust that may become airborne during handling. If possible handle the material in an efficient fume hood.Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.
General hygienic measures:	Perform routine housekeeping.Wash hands before breaks and immediately after handling the product.Avoid contact with skin, eyes, and clothing.Before rewearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Dark brown solid	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure**:	Not Determined
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	Not Determined	**Relative density**:	Not Determined
Melting/Freezing point:	290 °C	**Solubilities**:	Insoluble in water
Boiling point/Boiling range:	Not Determined	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	> 290 °C
Flammability (solid,gaseous):	Not Determined	**Viscosity**:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Reacts with metallic powders.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.Dust formation.
Incompatible materials: Reducing agents, organic materials, active metals, halogens azides, and fulminates
Hazardous decomposition products: Lead oxides. Oxygen gases.

SECTION 11 : Toxicological information

Acute Toxicity: No additional information.	
Chronic Toxicity: No additional information.	
Corrosion Irritation: No additional information.	
Sensitization:	No additional information.
Single Target Organ (STOT):	1309-60-0 Large dust exposure may cause encephalopathy, seizures, coma, and cardio respiratory arrest.1309-60-0 Central Nervous System impairment, Hematologic effects, and Peripheral Nervous System impairment
Numerical Measures:	No additional information.
Carcinogenicity:	1309-60-0 : OSHA specifically regulat ed carcinogen (Lead dioxide)
Mutagenicity:	No additional information.
Reproductive Toxicity:	1309-60-0 May cause congenital malformation in the fetus. 1309-60-0 Known human reproductive toxicant

SECTION 12 : Ecological information

Ecotoxicity

1309-60-0: Very toxic to the aquatic environment. May cause long-term adverse effects in the aquatic environment.

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.Contact a licensed professional waste disposal service to dispose of this material.Dispose of empty containers as unused product.Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1872

UN proper shipping name

Lead dioxide

Transport hazard class(es)

Class:
5.1 Oxidizing substances

Packing group:III
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: . The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment.The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:

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